

Source: All Sources : / . . . / : \$ Patent Abstracts f Japan  
Terms: 55082458 (Edit Search)

JP-A 55082458; JP-A 53154950; JP-A 78154950

COPYRIGHT: (C)1980,JPO & Japio

PATENT ABSTRACTS OF JAPAN

55082458

■ GET EXEMPLARY DRAWING

June 21, 1980

PREPARATION OF SEMICONDUCTOR DEVICE

**INVENTOR:** IIZUKA HISAKAZU

**APPL-NO:** 53154950 (JP 78154950)

**FILED:** December 18, 1978

**ASSIGNEE:** TOSHIBA CORP

**INT-CL:** H01L27/04, (Section H, Class 01, Sub-class L, Group 27, Sub-group 04);  
H01L21/265, (Section H, Class 01, Sub-class L, Group 21, Sub-group 265)

**ABST:**

**PURPOSE:** To form a high resistance element that its accuracy is high and its integration degree is high, by injecting not less than one kind between oxygen or nitrogen into a resistance element region in a polycrystal silicon layer on a substrate in ionic shapes.

**CONSTITUTION:** A silicon oxide film 22 with 1 [ $\mu$ ] thickness is made up on a p-type Si substrate 21, and a phosphor added polysilicon layer 23 is attached by means of a method, such as a CVD method in a phosphor atmosphere and patterned. The electrode portions at the both ends are coated with oxide silicon films 24, and not less than one kind between O or N ions are injected into the phosphor added polysilicon layer 23 in the quantity of dose of  $10^{10}$  to  $10^{18}$  [Similar]  $10^{10}$  to  $10^{18}$  /cm<sup>2</sup> as using the oxide silicon film 24 as a mask. The whole may be heated. A high resistance element with  $1k$  [ $\Omega$ ] [Similar]  $10^5$  M [ $\Omega$ ] that SiO<sub>x</sub>(x ≤ 2) or Si<sub>3</sub>N<sub>x</sub>(x ≤ 4) or both are formed is built up in the region to which ions are injected. The resistance element made up in this way has the excellent accuracy of dimensions, and the desired resistance value can precisely be obtained by the control of the quantity of dose.

**LOAD-DATE:** June 17, 1999

Source: All Sources : / . . . / : \$ Patent Abstracts of Japan  
Terms: 55082458 (Edit Search)  
View: Full  
Date/Time: Monday, August 7, 2000 - 2:12 PM EDT

[About LEXIS-NEXIS](#) | [Terms and Conditions](#)

[Help](#)